



COSTA MESA SANITARY DISTRICT Sewer Rate Study



Public Workshop

March 14, 2013

HF&H
Consultants, LLC





Purpose of the Workshop

- Provide background for sewer rate study
- Summarize the study results
 - Revenue requirements
 - Rate structure modifications
 - Customer bill comparisons
- Provide an opportunity for public input
- Address public comments and questions





BACKGROUND





Background – Sewer Service Providers

- Residents and businesses receive sewer service from two agencies
 - Costa Mesa Sanitary District (CMSD)
 - Responsible for local facilities that collect and convey wastewater to OCSD's regional treatment plant
 - Responsible for managing contracted solid waste services
 - Orange County Sanitation District (OCSD)
 - Responsible for treating wastewater from cities and districts in Orange County
- Both districts bill annually on the tax rolls
- Tonight's workshop deals with CMSD's charges only
 - OCSD's public hearing is scheduled for March 27, 2013





Background – Sewer Rate Study

- Sewer rate study started in 2012
- Study purpose
 - Prepare a five-year projection of revenue requirements
 - Conduct cost-of-service analysis to determine each customer class' share of the total revenue requirement
 - Adjust rate structure to reflect cost of service
- Preliminary results presented to Board April 16, 2012
- Rate Study presented to Board December 20, 2012
 - Incorporated Board's comments and further analysis
 - Board authorized Staff to initiate procedure for increasing rates





Background - Procedure

- Procedural requirements for increasing sewer rates
 - Established by Proposition 218 in 1996
 - Agency documents that fees and charges are proportionate to the cost of providing service (a rate study)
 - Notices are mailed to property owners/rate payers of the proposed maximum rate increases
 - Written protests can be submitted by property owners/rate payers during 45-day protest period
 - If a majority protests, the rates cannot be increased
 - If no majority protest, rates can be increased no greater than the amount in the notice





Background – Current Status

- Notices of proposed rate increases were mailed in February 2013
- Next steps
 - Hold tonight's workshop
 - Hold protest hearing on April 18, 2013 to determine if a majority protested
 - Approximately 13,039 protests or more constitute a majority protest
 - Board adopts rates for next five years
 - Charges will be included on tax rolls in August for billing in October





STUDY RESULTS





Required Revenue from Rates

- FY 2013-14 (next year)
 - No increase in total rate revenue
 - Adjustments in rate structure to ensure that customers are paying their proportionate share
 - Some bills increase, others decrease
- Subsequent Adjustments (applied equally to all customer classes)
 - FY 2014-15 = 2.0% increase
 - FY 2015-16 = 2.0% increase
 - FY 2016-17 = 2.0% increase
 - FY 2017-18 = 2.0% increase



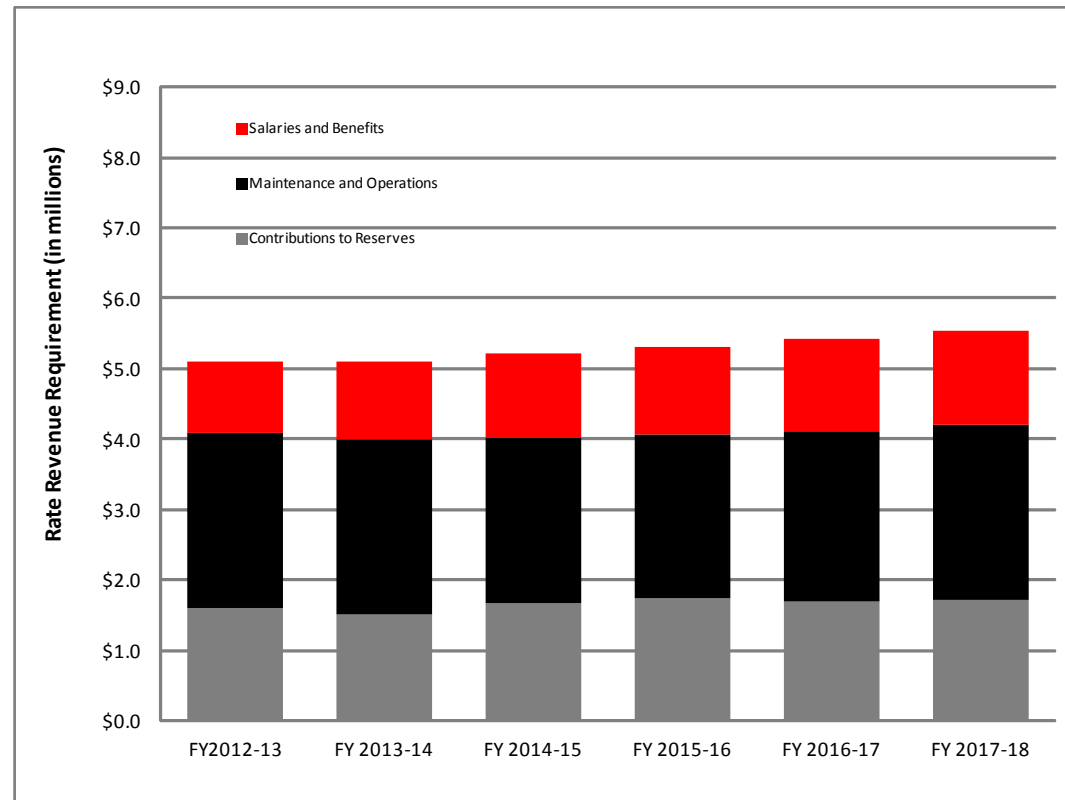


Required Revenue from Rates (cont.)

Rate increases
strengthen
District's
financial position

- Focused on maintaining adequate operating and capital reserves
- Increasing reserves eliminates the need to use capital reserves to help with cash flow for operations

Annual Revenue Requirement	FY2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Salaries and Benefits	\$ 1,003,940	\$ 1,123,350	\$ 1,194,950	\$ 1,252,250	\$ 1,312,450	\$ 1,334,050
Maintenance and Operations	2,494,505	2,469,286	2,336,988	2,334,313	2,405,933	2,479,701
Contributions to Reserves	1,600,555	1,517,494	1,680,394	1,730,015	1,704,528	1,717,618
	\$ 5,099,000	\$ 5,110,130	\$ 5,212,332	\$ 5,316,579	\$ 5,422,910	\$ 5,531,369
Annual increase		0.2%	2.0%	2.0%	2.0%	2.0%





Rate Structure Adjustments

- Key objectives
 - Ensure that each customer class is paying its proportionate share
 - Work within current billing constraints
 - Existing charges per dwelling unit for residential and per 1,000 square feet for non-residential customers are required because District does not have direct access to metered water use data
 - Use of flat charges like CMSD's is common in Orange County
- Residential adjustments
 - Base single family and multi family charges based on estimated inside water use (without irrigation)
- Commercial and industrial adjustments
 - Charges reflect estimate differences in strength of wastewater
- Integrate FOG* charges in each class' adjusted rates



Residential Bill Impacts (FY 2013-14)

- Single Family
 - From \$69.00 to \$85.34 per dwelling unit
 - Increases \$16.34 per year or \$1.36 per month
- Multi Family
 - From \$53.77 to \$50.09 per dwelling unit
 - Impact varies depending on number of DUs per account
 - Decreases \$3.68 per unit per year or \$0.31 per dwelling unit per month





Commercial/Industrial Bill Impacts (FY 2013-14)

- Commercial and Industrial classes
 - Changes vary depending on square footage and FOG charge
- Commercial – Average Strength (no food preparation)
 - Decreases ranging from \$3 to \$399 per year
 - Median adjustment = \$5.32 reduction per year
- Commercial – High Strength (with food preparation)
 - Ranging from \$1,133 decrease to \$1,733 increase per year
 - Median adjustment = \$161.63 reduction per year
- Industrial
 - Decreases as great as \$5,292 per year
 - Median adjustment = \$81.38 reduction





Proposed Rate Adjustments

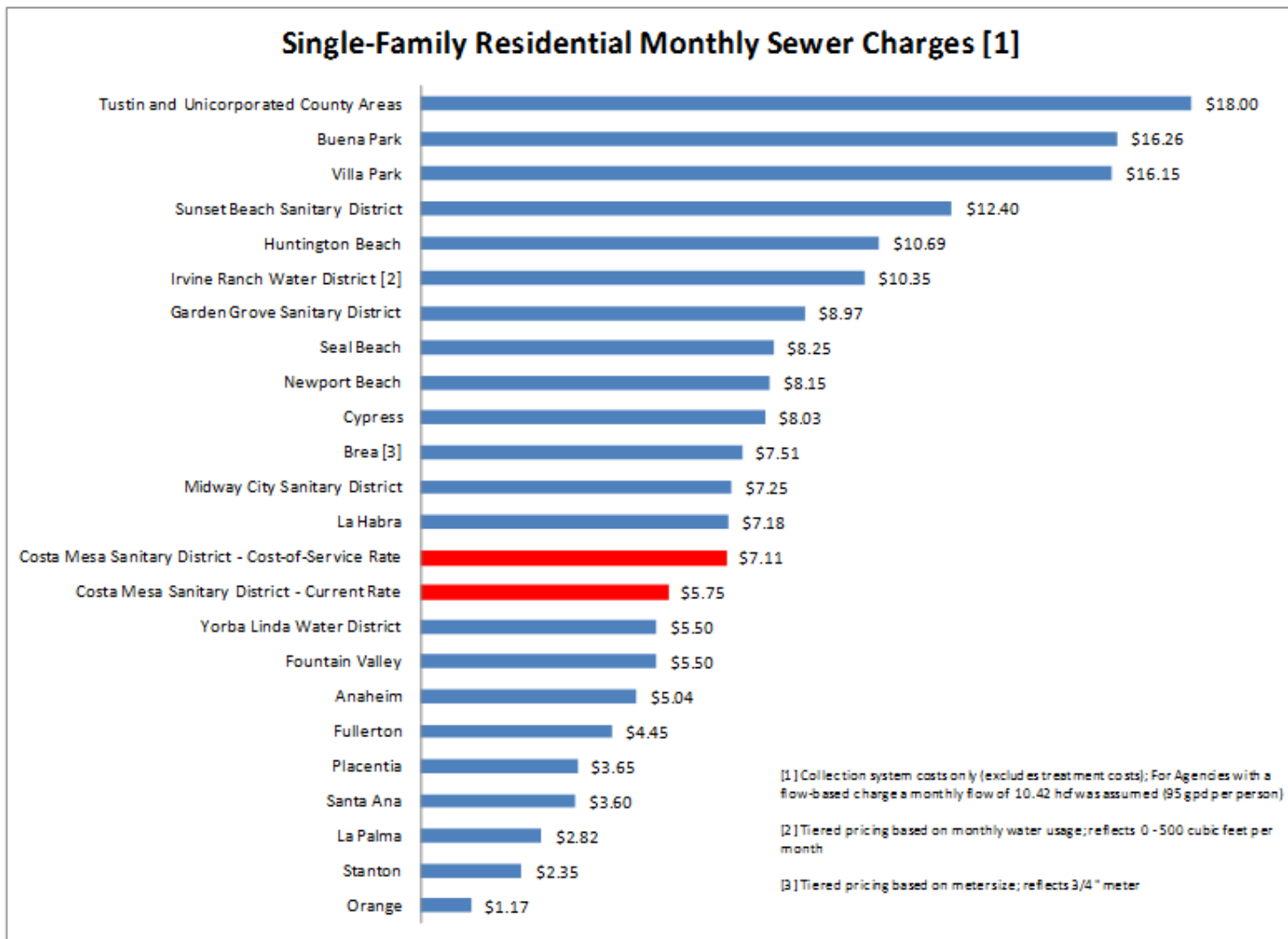
Proposed Annual Wastewater Rates						
Customer Class	Current Rate	Proposed 7/1/2013	Proposed 7/1/2014	Proposed 7/1/2015	Proposed 7/1/2016	Proposed 7/1/2017
Residential (Per Dwelling Unit)						
Single Family	69.00	85.34	87.05	88.79	90.57	92.38
Multi Family	53.77	50.09	51.09	52.11	53.15	54.21
Non-Residential (Per 1,000 sq. ft.)						
Commercial - Ave Strength	38.69	37.96	38.72	39.49	40.28	41.09
Commercial - High Strength	43.66	41.40	42.23	43.07	43.93	44.81
Industrial	113.72	97.44	99.39	101.38	103.41	105.48

After rate structure adjustments in FY 2013-14,
subsequent rates increase 2% per year for all
classes





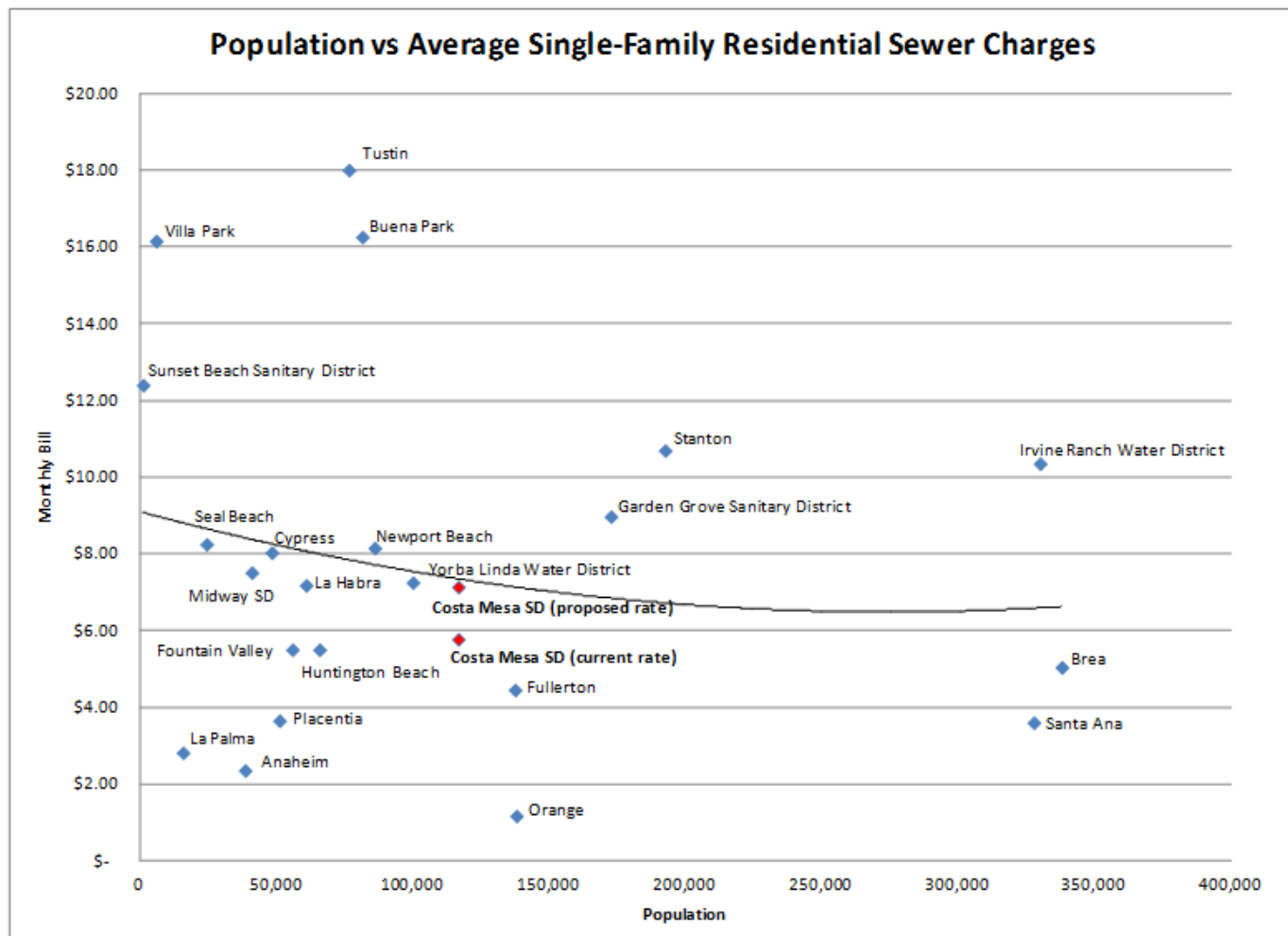
Comparison of Single Family Charges (Monthly)





Comparison Based on Agency Size

Adjustments for service area characteristics (e.g., population) provide additional information to understand differences in charges among agencies





Summary

- Slight annual increases in revenue beginning in FY 2014-15
 - Maintain CMSD's financial position with additional capital reserves
- Rate structure adjustments comply with legal requirements
 - Ensure that each class is paying its proportionate share
- Resulting changes improve rate payer equity
- Resulting customer bills compare favorably with neighboring agencies





QUESTIONS & ANSWERS





HF&H Consultants, LLC
201 North Civic Drive
Suite 230
Walnut Creek, CA 94596
925-977-6950

John Farnkopf, P.E., Senior Vice President
Rick Simonson, C.M.C., Vice President





Estimated Residential Flows

Customer Class	Dwelling Units	Persons per Household	Water Usage (gpd per person)	Total Usage (gpd)	Est. Population	Est. Flow per DU (gpd)
	A	B	C	D = A*B*C	E = A*B	F = D÷A
Single-Family (SF)	18,358	2.68	55	2,706,000	49,200	147
Multi-Family (MF)	26,514	<u>2.55</u>	<u>40</u>	<u>2,700,000</u>	<u>67,500</u>	<u>102</u>
<i>MF compared to SF</i>		95%	73%		116,700	69.1%
Total Gallons per Day (gpd)				5,406,000		
gpd * 365 days ÷ 748.052 = HCF =				2,637,771		

Flow estimates are based on industry standards and are consistent with similar agencies (e.g., OCSD)





Estimated Non-Residential Flows

Annual Non-residential Flow Calculation			Notes:
District-wide Total Flow (gpd)	11,086,500	gpd	Population x 95 gpd
Less: Residential	(5,406,000)	gpd	Figure 4-6
Less: Inflow & Infiltration (I&I)	<u>(1,108,650)</u>	gpd	10% of Total Flow
Total Non-residential Flow	4,571,850	gpd	
Total Non-residential Flow	2,230,761	hcf	Converted total non-residential flow from above from gpd to hcf
Commercial - Average Strength	765,924	hcf	Developed Commercial Acres x District's Land Use Flow
Commercial - High Strength	546,288	hcf	Coefficients; Apportioned between average and high strength customers based on square footage
Industrial	<u>918,549</u>	hcf	Developed Industrial Acres x District's Land Use Flow Coefficients
	2,230,761	hcf	

Residential flow and inflow and infiltration are subtracted from CMSD's total flow to derive non-residential flow





Units of Service

Customer Class	Mass Balance					
	<u>Accounts</u>	<u>Flow¹</u>	<u>BOD</u>	<u>TSS</u>	<u>BOD</u>	<u>TSS</u>
	Parcels	HCF	mg/l ²	mg/l ²	lbs	lbs
Residential						
Single-Family	17,788	1,320,349	175	250	1,442,398	2,060,568
Multi-Family	5,922	1,317,422	175	250	1,439,200	2,055,999
Total Residential	23,710	2,637,771			2,881,597	4,116,568
Non-Residential						
Commercial - Average Strength	1,133	765,924	175	250	836,723	1,195,319
Commercial - High Strength	444	546,288	500	400	1,705,101	1,364,081
Industrial	789	918,549	500	500	2,867,017	2,867,017
Total Non-Residential	2,366	2,230,761			5,408,841	5,426,417
Inflow & Infiltration (I & I)	0	540,948	65	239	219,796	807,035
Total	26,076	5,409,480	252	306	8,510,234	10,350,019

HCF = hundred cubic feet = 748.052 gallons

¹ Estimated annual flow by customer class is calculated in Figures 4-6 and 4-7 below

² mg/l (milligrams per liter) by customer class as prescribed by the State's Water Resources Guidelines

Strength concentrations (BOD, TSS) are based on State Guidelines





Cost of Service Allocations

STEP 1 – Determine Unit Costs of Service

- Unit costs apply equally to all customers to ensure proportionality

FY 2013/14						
Revenue Requirement (per District Budget)						
		Allocated Costs				
		Accounts	Flow	BOD	TSS	Total
Direct Expenses (from Figure 4-2)	\$ 3,884,956	\$ 271,271	\$ 3,152,201	\$ 230,742	\$ 230,742	\$ 3,884,956
Composite Expenses (From Figure 4-3)	\$ 1,225,173	\$ 85,549	\$ 994,089	\$ 72,768	\$ 72,768	\$ 1,225,173
Total Direct and Composite Expenses A	\$ 5,110,130	\$ 356,820	\$ 4,146,290	\$ 303,510	\$ 303,510	\$ 5,110,130
Unit Cost Calculations						
Units of Service B	26,076	5,409,480	8,510,234	10,350,019	from Figure 4-9	
Unit Type	Parcels	HCF	1,000 lbs	1,000 lbs		
Unit Costs (A ÷ B) =	\$13.68	\$0.76650	\$35.66	\$29.32		
	<i>\$/Parcel</i>	<i>\$/HCF</i>	<i>\$/1,000 lbs</i>	<i>\$/1,000 lbs</i>		



Cost of Service Allocations

STEP 2 – Estimate units of service by customer class

- Represents how much benefit each class receives

Customer Class	Units (by Customer Class)			
	<u>Accounts</u>	<u>Flow¹</u>	<u>BOD¹</u>	<u>TSS¹</u>
	Parcels	HCF	lbs	lbs
(from Figure 4-5)				
Residential				
Single-Family	17,788	1,563,333	1,531,739	2,403,476
Multi-Family	5,922	1,470,883	1,492,187	2,265,394
Total Residential	23,710	3,034,216	3,023,926	4,668,870
Non-Residential				
Commercial - Average Strength	1,133	820,366	853,399	1,265,173
Commercial - High Strength	444	579,637	1,727,675	1,424,729
Industrial	789	975,261	2,905,234	2,991,248
Total Non-Residential	2,366	2,375,265	5,486,308	5,681,149
Total	26,076	5,409,480	8,510,234	10,350,019



Cost of Service Allocations

STEP 3 – Calculate each class' share of the total revenue requirement

Customer Class	Units (by Customer Class)			
	Accounts Parcels	Flow ¹ HCF	BOD ¹ lbs	TSS ¹ lbs
(from Figure 4-5)				
Residential				
Single-Family	17,788	1,563,333	1,531,739	2,403,476
Multi-Family	5,922	1,470,883	1,492,187	2,265,394
Total Residential	23,710	3,034,216	3,023,926	4,668,870
Non-Residential				
Commercial - Average Strength	1,133	820,366	853,399	1,265,173
Commercial - High Strength	444	579,637	1,727,675	1,424,729
Industrial	789	975,261	2,905,234	2,991,248
Total Non-Residential	2,366	2,375,265	5,486,308	5,681,149
Total	26,076	5,409,480	8,510,234	10,350,019

$$\begin{array}{rcl}
 \mathbf{X} & \text{Unit Costs} = & \begin{array}{cccc}
 \$13.68 & \$0.76650 & \$35.66 & \$29.32 \\
 \$/\text{Parcel} & \$/\text{HCF} & \$/1,000 \text{ lbs} & \$/1,000 \text{ lbs}
 \end{array} \\
 & & =
 \end{array}$$

Customer Class	FY 2013-14 Revenue Requirement Allocation				
	Accounts	Flow	BOD	TSS	Total
Residential					
Single-Family	\$ 243,340	\$ 1,198,295	\$ 54,622	\$ 70,470	\$ 1,566,726
Multi-Family	81,013	1,127,432	53,211	66,421	1,328,077
Total Residential	324,353	2,325,726	107,833	136,891	2,894,804
Non-Residential					
Commercial - Average Strength	15,499	628,811	30,432	37,095	711,837
Commercial - High Strength	6,074	444,292	61,609	41,773	553,748
Industrial	10,794	747,538	103,601	87,703	949,635
Total Non-Residential	32,367	1,820,640	195,642	166,571	2,215,220
Total Revenue Requirement	\$ 356,720	\$ 4,146,367	\$ 303,475	\$ 303,463	\$ 5,110,024

Current Payments	Variance
\$ 1,266,702	\$ 300,024
1,425,658	(97,580)
2,692,360	202,444
725,523	(13,686)
583,922	(30,175)
1,108,325	(158,689)
2,417,770	(202,550)
\$ 5,110,130	\$ (106)





Cost of Service Allocations

Step 4 - Rates calculated by customer class based on billing units

- No need for separate FOG charges because costs are included in the unit costs of service

Customer Class	FY 2013-14 Revenue Requirement Allocation	Billing Units	Cost-of- Service Rate Calculation
	A	B	A ÷ B = C
Residential		Dwelling Units	\$/Unit
Single-Family	\$ 1,566,726	18,358	\$85.34
Multi-Family	<u>1,328,077</u>	26,514	\$50.09
Total Residential	2,894,804		
Non-Residential		Square Feet	\$/ 1000 Sq. Ft.
Commercial - Average Strength	711,837	18,753,490	\$37.96
Commercial - High Strength	553,748	13,375,760	\$41.40
Industrial	<u>949,635</u>	9,745,720	\$97.44
Total Non-Residential	2,215,220		
Total Revenue Requirement	\$ 5,110,024		

